

AMENDMENTS TO THE SPECIFICATION

In the Application, please amend paragraph 0005 of the specification as hereinafter indicated.

[0005] A TOD system always provides the driving torque to one axle (primary axle), and then sends torque to the other (secondary axle) as needed to provide 4WD mode while yet avoid avoiding unnecessary differential lock in turns. In normal driving, most torque goes to the primary axle, with little torque going to the secondary axle. When in slippery conditions, if the primary axle slips, the transfer case will direct torque to the secondary axle.

Please also amend paragraph 0011 of the specification as hereinafter indicated.

[0011] Although the vehicle rollover trend might be reduced by applying throttle in the engine controls so as to increase driving torque of the driven wheels, the longitudinal force offsets between the outside wheels and inside wheels (due to vehicle weight transferred from inside wheels to outside wheels) may generate a moment which tends to over-steer the vehicle. The larger the vehicle chassis or suspension roll angle, the larger the longitudinal force offset between the inside and outside wheels. Therefore, a simple driving torque control could reduce the roll trending, but at the expense of inducing some vehicle over-steer. Since an increased over-steer could eventually reduce the benefit of tire lateral force reduction, and over-steer during an increased vehicle speed might cause yaw stability problems, a simple driving torque scheme alone might be inappropriate for achieving vehicle roll and yaw stability control performances. In order to eliminate such an adverse effect, an integration between the driving torque control and the brake torque control through controlling the corresponding ECUs is pursued. For this reason, a desirable roll stability control using a 4x4 system might include control units of a brake control system, an engine control system, and a 4x4 system control.

Please also amend paragraph 0014 of the specification as hereinafter indicated.

[0014] In yet another aspect of the invention, a method of controlling a vehicle having an active center differential included in a transfer case and active axle differentials comprises determining a rollover condition[[,]]; in response to the rollover condition, disengaging an inside wheel from an outside wheel with an active axle differential; and thereafter, determining a wheel lift condition of the inside wheel.

Please also amend paragraph 0015 of the specification as hereinafter indicated.

[0015] In yet another aspect of the invention, a method for controlling the vehicle rollover having an active center differential and active axle differentials ~~comprise~~ comprises determining a rollover condition[[,]]; in response to the rollover condition, disengaging an outside front wheel from an inside wheel with the active axle differential[[,]]; applying a brake torque to the outside front wheel; and applying driving torque to an outside rear wheel to counter the deceleration caused by braking the front outside wheel.

Lastly, please also amend paragraph 0016 of the specification as hereinafter indicated.

[0016] In yet another aspect of the invention, a method for controlling the vehicle rollover having an active center differential and active axle differentials comprises determining a rollover condition[[,]]; in response to the rollover condition, disengaging an outside front wheel from an inside wheel with the active axle differential[[,]]; applying a driving torque to the outside front wheel; and applying brake torque to an outside rear wheel to counter the acceleration caused by driving the front outside wheel.